Workshop on Nuclear Physics and Related Computational Science R&D for Advanced Fuel Cycles Bethesda, Maryland, August 10-12, 2006

Nuclear Data Working Group

Mark Chadwik, LANL, co-chair Pavel Oblozinsky, BNL, co-chair

Status: August 7, 2006

Nuclear Data Plenary Talk: Thursday, August 10

Nuclear Data, P. Oblozinsky, BNL and M. Chadwick, LANL, 60'

Part 1: New ENDF/B-VII Library

Part 2: Actinides, covariances, neutronics

Nuclear Data WG Meeting: Friday, August 11

Agenda

Note: Speakers should, where appropriate, include comments on how high-performance computing can open up new opportunities.

08:30 - 10:30

- 1. Introductory comments, 10'
 - Comments by Chadwick, LANL, 5'
 - Comments by Oblozinsky, BNL, 5'
- 2. Neutron cross section data, 50'
 - Improved cross sections for major actinides, Chadwick, LANL, 20'
 - Reduced uncertainties for minor actinides, Kawano, LANL, 10'
 - Improved cross sections for other materials
 - Zr data: New capabilities and future needs, Herman, BNL, 10'
 - Inelastic scattering on structural materials and coolants
 - Contributions from floor, all
- 3. Covariance data, 60'
 - Covariance data in ENDF/B-VII, D. Smith, ANL, 10'
 - Covariance tools
 - Resonance region: ORNL method, Larson, ORNL, 10'
 - Resonance region: BNL-LANL method, Rochman, BNL, 10'
 - Fast neutron region: BNL-LANL method, Herman, BNL, 10'
 - International effort and covariance vision, Oblozinsky, BNL, 10'
 - Contributions from floor, all

10:30-11:00 Coffee Break

11:00-12:00

- 4. Other data, 60'
 - Decay data library in ENDF/B-VII, Sonzogni, BNL, 15'
 - Post-scission fission physics data, prompt and delayed neutrons, gammas and fission products and their energies, Bonneau, LANL, 15'
 - Cross sections for gas production, recoils and damage, Haight, LANL, 10'
 - Contributions from floor, all

12:00-01:00 Lunch Break

01:00-03:00

- 5. Quality assurance, processing, dissemination, 50'
 - Integral validation and quality assurance, Kahler, LANL, 15'
 - Performance of ENDF/B-VIIb2 for a series of diverse ZPR/ZPPR assemblies, McKnight, ANL, 10'
 - Processing of covariances in the resonance region, Dunn, ORNL, 10'
 - Processing codes development, Kahler, LANL, 10'
 - Data dissemination, Sonzogni, BNL, 5'
- 6. Other topics for discussion, 30'
 - Computational needs, Herman, BNL, 10'
 - Nuclear reaction model codes development, Kawano, LANL, 10'
 - Neutronics codes development
 - Sensitivity calculations and impact of nuclear data on AFC
 - Contributions from floor, all
- 7. Drafting WG report, 40'